

UNIVERSITI TEKNOLOGI MARA

**HYBRID QR CODE STUDENT ATTENDANCE
SYSTEM USING FIREBASE AND REACT**

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**Thesis submitted in fulfilment of the requirements for Bachelor of
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STUDENT DECLARATION

I certify that this thesis and the project to which it refers is the product of my own work and that any idea or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

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ABSTRACT

This study develops a Student Attendance System based on QR Code technology that can record the attendance of the students in universities. QR Code can generate unique details that is encoded and can be used for encryption at the same time to ease the process of authentication process. The current practice to record attendance in most universities is through manual procedure by using paper-based approach to collect student's attendance. This practice will lead to inefficient handling of documents and difficult to track the students' attendance performance in class. There are three objectives for this research which need to be achieved, to design a class attendance system based on QR Code, to develop a student attendance system that is able to record and manage student attendance using QR Code, and to evaluate effectiveness of class attendance system to record class attendance. Firebase and React are the software that will be used to develop this system to generate QR Code. The aim is to develop a hybrid student attendance system application which will combine both web-based and mobile-based application in one development. The significance of this project is to develop an effective hybrid attendance system that will be able to help the lecturers in universities to solve the attendance problem by using QR Code technology. The results show that all of the items asked were rated high above the average based on the testing of user acceptance test that had been conducted. Most of the respondents believe that this system is very helpful for lecturers and students to manage attendance.

Keywords: Student Attendance, QR Code, Hybrid attendance system, Firebase and React.

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